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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/736,749	12/16/2003	Thomas Lykke Sorensen	10354.200-US	5686
25908	7590	10/11/2006	EXAMINER	
NOVOZYMES NORTH AMERICA, INC. 500 FIFTH AVENUE SUITE 1600 NEW YORK, NY 10110				CHAWLA, JYOTI
		ART UNIT		PAPER NUMBER
		1761		

DATE MAILED: 10/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/736,749	SORENSEN ET AL.
	Examiner	Art Unit
	Jyoti Chawla	1761

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on ____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) Claim(s) ____ is/are allowed.
- 6) Claim(s) 1-17 is/are rejected.
- 7) Claim(s) ____ is/are objected to.
- 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on ____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. ____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ . |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/16/03</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: ____ . |

DETAILED ACTION

The Amendment filed December 16, 2003 has been entered. Claims 8, 10-12, 15 and 17 have been amended. Claims 1-17 are pending and are examined in the application.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2 and 4-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Nielsen (WO 00/54601). Regarding claims 1-17, Nielsen teaches a process of making cheese from enzyme (phospholipase) treated milk and use of the resulting cheese as an ingredient in food products.

Regarding claims 1 and 17, Nielsen teaches a method for producing cheese, comprising:

- a) treating a dairy composition comprising cow's milk (Page 7, lines 14-16) and/or one or more cow's milk fractions, with a phospholipase (Page 3, lines 18-19);
- b) heat treating said dairy composition at a temperature of at least 50°C (Page 8, lines 13-15); and

c) producing cheese from said heat treated dairy composition (Page 3, line 20); wherein step a) is conducted before or during step b). (Page 3, lines 21-25) (Also see page 8, lines 13-24).

Regarding claim 2,4-7 Nielsen teaches the process where the phospholipase treatment is conducted between 50-80°C from 10-180 minutes (Page 9, lines 13-23), which fall in the ranges recited by the applicant. Since the enzymatic treatment and heating can be done simultaneously as recited by the applicant in claim 1, therefore Nielsen anticipates applicant's recited claims.

Regarding claims 8 and 9, Nielsen teaches addition of CaCl₂ among the raw materials (Page 24, line 14).

Regarding claim 10, Nielsen also teaches of inactivation of phospholipase during the heat treatment (Page 9, lines 25-26).

Regarding claim 11, Nielsen teaches the dairy composition comprises cow's milk fractions selected among skim milk, butter-milk, whey, cream, or any combination thereof (Page 5, lines 23-27).

Regarding claims 12-14, Nielsen teaches cheese is stretched curd cheeses like mozzarella and pizza cheese (Page 5, lines 12-21).

Regarding claims 15 and 16, Nielsen teaches processing the cheese into a food product consisting of pizza, ready-to-eat dishes, toast, burgers, lasagna, dressing, sauces, cheese powder, cheese flavor, and processed cheese (Page 17, lines 11-15).

Art Unit: 1761

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

Determining the scope and contents of the prior art.

Ascertaining the differences between the prior art and the claims at issue.

Resolving the level of ordinary skill in the pertinent art.

Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nielsen (WO 00/54601) as evidenced by Dairy Processing.

Nielsen has been applied to claims 1, 2, 4-17 above.

Regarding claim 3, where the heat treatment in step b) of claim 2, is conducted at 100-120°C for 1 second-15 minutes, Nielsen teaches Addition of phospholipase to cream and treating the cream to UHT (Ultra High Temperature) treatment and the for a few seconds to stabilize the fat in the milk product (Page 18, lines 22-28) and also treating cheese to high temperature in the range of 150-350 °C (Page 17, lines 18-19). The range of UHT where the temperature lies between 80-145 °C and the corresponding time of treatment lies from a few seconds to about 8 minutes (Dairy Processing, Page 96, Figure 5.3). It was known in the art that pasteurization/ sterilization or processing

time of dairy is an inverse function of the temperature to which the dairy product is exposed. Nielsen teaches heat treatment from 50-80°C for 10-180 minutes (Page 9, lines 13-23). It was known in the art that time of exposure of milk decreases significantly by increasing the temperature over about 80 °C (Dairy Processing, Page 96, Figure 5.3). Most UHT treatments last a few seconds at temperatures in the recited range of the applicant. Interpreting the graph (Dairy Processing, Page 96, Figure 5.3) dairy products need to be exposed to temperatures between 100-120 °C between 2 seconds to a few minutes depending on whether the product is directly or indirectly exposed to UHT. The range taught by Dairy Processing falls within the range recited by the applicant in claim 3.

Nielsen teaches heating the phospholipase treated milk to UHT but does not specifically provide the UHT conditions. Exposure to UHT of 100-120°C (as recited by the applicant) for a few seconds to about 6 minutes has been known for milk products (Dairy Processing, Page 96, Figure 5.3). Given that Nielsen teaches a) heating the composition between 50-80 °C for 10-180 minutes and also teaches b) heating the dairy product to UHT for a few seconds. UHT range of temperature for dairy where a few seconds range from about 80-140 °C, which encompasses applicant's recited range. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Nielsen and choose the specific temperature within the temperature range, as instantly claimed. One would have been further motivated to do so in order to effectively sterilize the milk and also inactivate the enzyme phospholipase in a single step in the process of making of the cheese product.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 10, 12 –17 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 4-13 of copending Application No. 10/736750. Although the conflicting claims are not identical, they are not patentably distinct from each other because both applications claim a method of making cheese using cow's milk and phospholipase and processing the cheese into food products consisting of pizza, ready-to-eat dishes, toast, burgers, lasagna, dressing, sauces, cheese powder, cheese flavor, and processed cheese.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Remarks/ Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jyoti Chawla whose telephone number is (571) 272-8212. The examiner can normally be reached on 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on (571) 272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jyoti Chawla
Examiner
Art Unit 1761



KEITH HENDRICKS
PRIMARY EXAMINER